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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/626,526 07/27/00 GREEN

F NEC1P004X1

EXAMINER

MM91/0427

CARY & KELLY LLP
1875 CHARLESTON ROAD
MOUNTAIN VIEW CA 94043

ARTUR ANDERSON, CPAPER NUMBER

DATE MAILED:

04/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/626,526

Applicant(s)

GREEN ET AL.

Examiner

Cornelius H. Jackson

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-58 is/are pending in the application.
- 4a) Of the above claim(s) 1-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim to priority of U.S. Provisional Application No. 60/145,831, filed on 27 July 1999, under 35 U.S.C. § 119(e).

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "logic" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The reference signs, "Figures 4A-B" on page 9, lines 23 and 29, are not shown in the drawings. Also, see page 11, line 2. Correction is required.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
5. The disclosure is objected to because of the following informalities:
"FIGS. 2AB" should be changed to FIGS. 2A-B on page 8, line 4. Also, "Equation 1B" and the statement " $FSR_{ChanSel}$ differs from the $FSR_{GridGen}$ by an amount substantially corresponding to $1/M * FSR_{GridGen}$ " does not agree with one another, see page 16, lines 4 and 7-8.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 34, 37-40 and 53-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "substantially", in claims 34, 37, 40, 53, 54 and 56-58 is a broad term and does not constitute a limitation in any patentable sense. Claims 38-39 and 54-58 are rejected as depending on claims 37 and 53.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Claims 53-58 are rejected under 35 U.S.C. 112, sixth paragraph, because the functional recitations of the claims have not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth 35 U.S.C. 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 O.G. 279.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 33, 35-36 and 41-52 (and claims 34, 37-40 and 53-58, to the extent understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Zorabedian (6,108,355) in view of Wu (5606439). Zorabedian teaches a communication apparatus **col. 1 lines 28-42** comprising a grid generator suitable for positioning in an optical path of a beam and a channel selector with a tunable second optical path length to select one of the number of channels of the wavelength grid **Fig. 5B**. Zorabedian fails to teach the discreteness of each channel. Wu teaches tuning of the optical beam to discrete channels, **see abstract**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teachings of Wu to that of Zorabedian to enhance the performance of the conventional tunable filter. As for the grid generator having a first selected optical path length determinative of a first free spectral range substantially corresponding to a spacing between adjacent gridlines of the selected wavelength grid and the channel selector having a second optical path length determinative of a second free spectral range differing from the first free spectral range by an amount substantially inversely with the number of channels of the selected wavelength grid, it has been held that where the general conditions of a

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claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.

In regard to claims 34-40, the limitations were considered above as discovering the optimum or workable range.

In regard to claims 45-46, Zorabedian teaches the grid generator is a corrective element and the channel selector comprises an electro-optic actuator to tune the channel selector by varying the tunable second optical path length of said channel selector. It has been held to be within the general skill of a worker in the art to select a known material, such as, interference element/etalon or actuators on the basis of its suitability for the intended use as a matter of obvious design choice.

In regard to claims 41, 44, 49 and 52, Zorabedian teaches all the limitations except the use of temperature control of the etalon, optical circulator ports and error detecting. But the use of temperature control of the etalon, optical circulator ports and error detecting methods are all well known and would be of obvious design choice to one of ordinary skill in the art.

In regard to claims 47-48 and 50-51, Zorabedian teaches all stated limitations, **col. 4, lines 8-58.**

In regard to claims 42-43, Zorabedian teaches all stated limitations, **see col. 3, lines 20-26, col. 6, lines 16-52.**

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In regard to claims 53-58, the method of forming a device is not germane to the issue of patentability of the device itself, since the device of claims 1-28 will be made by these claimed methods.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703)306-5981. The examiner can normally be reached on 8:30 - 4:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa M. Arroyo can be reached on (703)308-4782. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.


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April 21, 2001


TERESA M. ARROYO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800